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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,949	12/26/2001	Naoki Mukaida	10416-18	7222
30076	7590	05/17/2007		
STEPTOE & JOHNSON LLP 1330 CONNECTICUT AVENUE, NW WASHINGTON, DC 20036			EXAMINER ROJAS, MIDYS	
			ART UNIT 2185	PAPER NUMBER
			MAIL DATE 05/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/032,949	MUKAIDA ET AL.	
	Examiner	Art Unit	
	Midys Rojas	2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,17,18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,17,18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to the amended claims, filed on 2/08/07 have been fully considered but are not persuasive.

Applicant argues that in claim 1 the start page indicates a page, preceding page thereof being not a free page and all following pages among the pages included in the corresponding physical block being free pages. Applicant explains that in claim 1, the start page always corresponds to a second or following page, and the claimed search means is not adapted for searching an empty block where no user data are written but is adapted for searching for such a start page. However, Hiraka discloses searching for a memory position that is marked as being in the "empty state" (Col. 17, lines 25-34) wherein being in the empty state means that the pages before this page are not in the empty state and the pages that follow it are in the empty state since they all belong to an empty block. When the block is in an empty state, it is a free block since it is free for new data to be written into it. In the system of Hiraka, when a block is marked as empty, wherein a block is made of pages, the pages prior to the first page of the block may not be free since they are part of another block that may not be empty. However, the preceding pages within the same block are free since the entire block is empty.

Applicant also argues that the decision means of claims 1 determines that progressive data writing is possible when it makes the decision that the number of the target page is equal to or greater than that of the start page and the write means is adapted for writing user data to the user area of the target page when the decision means determines that the progressive writing is possible. However, Hiraka teaches decision means responsive to a request to write user data

issued by the host computer for determining whether progressive data writing for writing user data to the target page designated by the host address is possible (control section, Col. 17, Claim 1, lines 12-19); and write means responsive to an affirmative determination by the decision means for writing user data to the target page without performing an inter-block data transfer (detection of empty block is done when in a writing mode, Col. 2, lines 45-55), wherein the decision means makes the decision that progressive data writing is possible if the number of the target page is equal to or greater than that of the start page. In the system of Hiraka, all blocks are of the same size. Therefore, when a block is detected as being empty, writing will be possible since the entire block is empty and therefore, it is sufficient space to store a new block of data.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 17-18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiraka (5,987,573).

Regarding Claim 1, Hiraka discloses a memory controller (10, Fig. 1) for accessing a memory (FM0) having a plurality of blocks each constituted of a plurality of pages (Col. 5, lines 15-23) based on a host address supplied from a host computer (14), comprising:

search means for searching, based on start page data written in a redundant area of a block including a target page designated by the host address (Col. 5, lines 25-35), a number of a start

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page of the block where the start page indicates a page, a preceding page thereof not being a free page and all following pages among the pages included in the corresponding block being free pages (Col. 17, Claim 1, lines 25-34);

when the system of Hiraka marks a block as empty, wherein a block is made of pages, the pages prior to the first page of the block may not be free since they are part of another block that may not be empty. However, the preceding pages within the same block are free since the entire block is empty.

decision means responsive to a request to write user data issued by the host computer for determining whether progressive data writing for writing user data to the target page designated by the host address is possible (control section, Col. 17, Claim 1, lines 12-19); and

write means responsive to an affirmative determination by the decision means for writing user data to the target page without performing an inter-block data transfer (detection of empty block is done when in a writing mode, Col. 2, lines 45-55),

wherein the decision means makes the decision that progressive data writing is possible if the number of the target page is equal to or greater than that of the start page. In the system of Hiraka, all blocks are of the same size. Therefore, when a block is detected as being empty, the entire block is empty and therefore, it is sufficient space to store a new block of data.

Regarding Claim 3, Hiraka discloses writing at least a part of new free page information resulting from writing user data to at least one page included in the block, which includes the target page (block status information written in the redundant area of memory pages when user data is written to the memory pages, Col. 5, lines 25-35).

Claims 17 and 20 are rejected using the same rationale as that of Claim 1.

Claim 18 is rejected using the same rationale as that of Claim 3.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Midys Rojas whose telephone number is (571) 272-4207. The examiner can normally be reached on M-F 5:30am - 4:00pm.

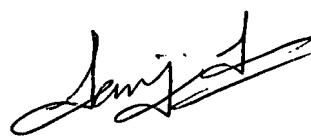
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah can be reached on (571) 272-4098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Midys Rojas
Examiner
Art Unit 2185

MR


SANJIV SHAH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100